

Manufacturing Occupancies

The B.C. Fire Code requires building owners and occupants to comply with the requirements on this checklist and in the *Fire Safety & You* brochure.

Includes:

- manufacturing and production
- Wood working operations
- spray operations

ADDITIONAL CHECKLISTS
FOR DUST-PRODUCING
PROCESSES AND SPRAY
COATING ON BACK

CHECKLIST: COMMON FIRE SERVICE REQUIREMENTS

- ❑ **Address:** must be visible from road and lane, free from foliage, trees, etc. and in a contrasting colour.
- ❑ **Chemical storage:** chemicals must be separated by class and stored in an approved manner.
- ❑ **Electrical equipment:** must be free of dust, with clearance from combustibles.
- ❑ **Emergency lighting:** may be provided by battery packs with remote and attached heads, or by emergency generators that will illuminate specified A/C fixtures or remote light heads. Must be operational, no visible damage, with heads aimed in proper direction, and serviced and tagged annually by a certified technician.
- ❑ **Exit doors:** must not be locked or blocked from either the inside or outside. Must be unlocked from the inside when the building is occupied. Must have panic hardware that releases when a force of 20 pounds or less is applied.
- ❑ **Exposures:** such as pallets or flammable items, should be noted as to the location and type.
- ❑ **Fire alarm systems:** must have a working A/C power-on bulb and be in good working condition with no audible or visual damage. Must have a current service tag (within the last 12 months) and up-to-date logbook.
- ❑ **Fire doors:** must not be blocked or wedged open, including stairwell doors. Must have closures and no wedges to hold open fire-rated doors.
- ❑ **Fire hose cabinets:** there must be clear access to cabinets, hose must be in good repair and complete with nozzles.
- ❑ **Fire hydrants:** must be accessible, free of damage and serviced within the specified date. Private hydrants require annual service, with records kept on site.
- ❑ **Fire separations:** may have no holes or openings that compromise their purpose.
- ❑ **Fire lanes:** must have an adequate clear width of six unobstructed metres from building.
- ❑ **Flammable liquids:** must be stored in approved containers, cabinets and rooms, cannot be dispensed into metal containers unless grounded, cannot be stored next to exits. Vapours cannot be allowed to accumulate.
- ❑ **Garbage disposal:** commercial containers must be located three metres from combustible buildings, and if inside, should have tight-fitting lids and be in fire-separated rooms.
- ❑ **'No smoking' signs:** must be posted in hazardous areas.
- ❑ **Portable fire extinguishers:** must:
 - ❑ be located adjacent to corridors or aisles that provide access to exits.
 - ❑ be mounted in a visible location, accessible, and serviced and tagged at least once every 12 months by a certified technician.
 - ❑ be full and functioning (no damage, corrosion, leaks, broken parts, clogged nozzles).
 - ❑ have a minimum rating 2A-10BC.
- ❑ **Portable heaters:** must be an approved type and kept away from combustibles.
- ❑ **Propane cylinders:** cylinders inside must be connected to appliance/equipment and all cylinders (full or empty) must be stored outside in a secure location.
- ❑ **Sprinkler and standpipe connections:** must be capped, free of debris and accessible.
- ❑ **Sprinkler systems:** must be inspected and tested by qualified personnel at least once per year. Must have a current service tag (within the last 12 months) and up-to-date logbook.
- ❑ **Sprinkler valves:** must be in the open position, either locked and chained or sealed and monitored electronically. No storage permitted within 18 in. of bottom of sprinkler heads.
- ❑ **Ventilation:** there must be adequate exhausting of vapours, dust etc.

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 CITY OF
SURREY
FIRE SERVICES

COMBUSTIBLE DUST-PRODUCING PROCESSES

Combustible dust that has a particle size of 0.5 mm (500 microns) or smaller is a fire and explosion hazard. A Manufacturing occupancy that produces combustible dust through its operations must implement additional measures to ensure a reasonable level of life safety.

In the City of Surrey, a dust-collection system generally requires a building permit. For additional information about building permit requirements, please review the *Requirements for Dust Producing Processes* bulletin available at www.surrey.ca or contact Planning & Development at 604-591-4441.

CHECKLIST: COMMON FIRE SERVICE REQUIREMENTS

Required in addition to checklist on front.

Dust accumulation and removal:

- Combustible dust** shall not be permitted to accumulate on surfaces, including elevated horizontal surfaces such as roof joists, in a layer thicker than 3.2 mm (1/8 in).
- Dust removal:** Where it is not possible to effectively remove accumulations of dust by vacuum, it is permitted to use compressed air or other means that will cause the dust to become suspended in the air during removal if all sources of ignition are eliminated and all machinery and equipment is de-energized.
- Dust collectors:** must be emptied daily.

Ducting:

- Flexible ductwork:** shall be kept to a minimum and only be used for final machine connection in a length required for machine operation.
- Non-metallic ducting:** is not permitted.

Equipment use and installation:

- Dust-collection systems / dust-producing equipment:** are installed in accordance with the BC Fire Code.
- Enclosureless dust-collectors:** are located at least 6.1 m (20 ft) from any means of egress, areas routinely occupied by personnel, and other dust collectors.
- Electrical panels and fixtures exposed to a combustible dust environment:** shall be de-energized and cleaned by a certified electrician.
- Equipment:** must be electrically grounded, bonded and interlocked.
- Operations or machines that generate sparks or combustible vapours:** may not be served by dust-collection systems connected to woodworking machines.
- Fire Safety Plan:** is required to be submitted to the Surrey Fire Services for approval and kept on site.

SPRAY-COATING PROCESS INVOLVING FLAMMABLE AND COMBUSTIBLE LIQUIDS

Spraying of flammable and combustible liquids is a fire and explosion hazard. A Manufacturing occupancy engaged in spray coating operations involving the use of combustible dry powders, flammable liquids or combustible liquids must implement additional measures to ensure a reasonable level of life safety.

In the City of Surrey, the installation of a spray booth or use of spray equipment requires a building permit. For additional information about building permit requirements, please review the *Requirements for Spray Coating Facilities* bulletin available at www.surrey.ca or contact Planning & Development at 604-591-4441.

CHECKLIST: COMMON FIRE SERVICE REQUIREMENTS

Required in addition to checklist on front.

Equipment use and installation:

- Spray booths, spray equipment, mixing rooms:** are installed in conformance the BC Fire Code.
- Equipment:** is electrically grounded, bonded, and interlocked.
- A clear space:** of not less than 0.9 m (3 ft) generally shall be maintained on all sides and above the spray booth.
- Mixing, dispensing or transfer of liquids:** shall only be done in the spray area or mixing room with the ventilation in operation.
- Amount of liquid permitted in a single spray area:** shall not exceed 227 l (60 gal).

Site maintenance:

- All spray areas:** shall be kept free of excessive accumulation of deposits of combustible residues.
- Filters:** are to be replaced as necessary to ensure efficient and effective operation of the ventilation system.
- Contaminated rags and fabrics:** are to be disposed of in approved waste containers.
- Fire Safety Plan:** is required to be submitted to the Surrey Fire Services for approval and kept on site.